AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on line 1 of page 3 of the current specification with the following amended paragraph:

The use of open tubular GC capillary tubes in combination with various portable chemical detectors is well-known in the art as can be concluded from the following citations: US Pat. No. 5,114,439 and US Pat. No. 5,856,616 disclose the use of compact sized and low power consuming GC columns for portable applications. Also WO9941601 discloses the use of a combined specific sampling system and a low power consuming GC column. Furthermore, US Pat. No. 4,888,295 discloses the use of "a commercially available" GC column in combination with detector formed by an array of electrochemical sensors (CPS), and US Pat. No. 6,354,160 discloses the use of a GC column in parallel with SAW-sensor based detectors, where the open tubular GC columns may also be those formed on silicon wafers.

Please replace the paragraph beginning on line 33 of page 6 of the current specification with the following amended paragraph:

In the gas chromatograph according to the invention, the used temperature control means preferably include a heating medium arranged to flow through said open space between said capillaries. The construction resembles a heat exchanger and excellently solves the heat transfer problems usually connected with small portable gas chromatographs. For such heating problems, see e.g. US Pat. No. 5,114,439.

Please replace the paragraph beginning on line 11 of page 7 of the current specification

with the following amended paragraph:

The feed arrangement of the claimed gas chromatograph typically comprises [[a]] an absorbing filter for generating a clean air reference for the chromatographic system. Further, said feed arrangement comprises a gas inlet for letting the gas sample into said column. There may also be a valve for directing the sample to the column, alternatively directly or through said filter, and another valve for directing the sample, alternative through the column or directly to the detector.

Please insert the following new paragraph before the heading "4. Detailed description of the invention" on line 15 of page 8 of the current specification:

Brief Description of the Drawings

The invention is illuminated in the enclosed Figures, in which:

Figure 1 (a) shows the air flow when the claimed system is in non-alarmed position;

Figure 1 (b) shows the air flow when the claimed system is in alarmed position;

Figure 1 (c) shows the air flow when the claimed system receives a sample;

Figure 2 (a) shows the cross-section of a single open tubular capillary used in the claimed gas chromatograph;

Figure 2 (b) shows the longitudinal section of an open capillary membrane bundle used as a GC column according to the invention;

Figure 2 (c) shows the cross-section of said open capillary membrane bundle; and

Figure 3 shows the result of feeding mixtures of methyl salicylate (MeS) and di-isopropyl methyl phosphonate (DIMP) (1% DIMP and 99% MeS) through a bundle of hollow fiber membranes to a detector according to the invention.

Please replace the paragraph beginning on line 16 of page 8 of the current specification with the following amended paragraph:

Figure 1 describes one preferred embodiment of using the hollow fiber capillary membrane bundle (2) as a GC column combined with a chemical detector (1). The sampling arrangement contains a valve (4), a vapor adsorbing filter (3), a gas inlet (5) and an optional additional valve (6). The position of the valve (4) determines whether the sample flows through the filter ~~(valve switched to the position 4b) or directly (valve switched to the position 4c)~~ , see Figure 1 (b), or directly, see Figure 1 (c), to the hollow fiber bundle based multicapillary GC column (2). The moment of switching the valve from the position ~~4b to 4c determine the~~ shown in Figure 1 (b) to the position shown in Figure 1 (c) represents the point t=0 of the retention time.

Please replace the paragraph beginning on line 24 of page 8 of the current specification with the following amended paragraph:

Another preferred embodiment, also shown in Fig.1, involves the additional valve (6) which is used to control whether the hollow fiber bundle based GC column is in use (~~position 6b or 6c~~ the positions shown in Figures 1 (b) and 1 (c)) or not (~~position 6a~~ the position shown in Figure 1 (a)). A faster response time is possible when a hollow fiber bundle is not used (~~position 6a~~ the position shown in Figure 1 (a)), but a more specific identification with less cross-sensitivity is possible when using the bundle (~~position 6b or 6c~~ shown in Figures 1 (b) and (c)).

Please replace the paragraph beginning on line 29 of page 8 of the current specification with the following amended paragraph:

Figure 2(a), shows the cross-section of a single hollow fibre used in a membrane bundle

according to the invention. The wall consists of an outer layer of support material (18) and an inner active membrane layer (19). Figure 2 (b) shows a longitudinal section and Figure 2 (c) shows a cross-section of a preferred ~~describes one~~ embodiment of a temperature regulation arrangement for the hollow fiber capillary membrane bundle used as a GC column. The bundle is packed in an airtight closed package where the cover (14) is made of heat insulator material. Controllably heated and ~~thermostatted~~ thermostated (13) fluid (liquid or gas) is circulated (11) through the package by means of a pump (12) and a tube (15), thus forming an interstitial medium (7) between the capillaries (16). In one preferred embodiment the interstitial medium fluid (7) is glycerol or industrial coolant solution. In another preferred embodiment the interstitial medium fluid (7) is air.

Please replace the paragraph beginning on line 3 of page 9 of the current specification with the following amended paragraph:

Another preferred embodiment employs a similar construction as shown in Fig. 2, but in this case, the system can either have heater (13) or not. In this preferred embodiment the interstitial medium fluid (7) is air, with a primary role for purging the system. Air is pumped [[in]]only [[in]] into the inlet (10) opening (8) and out through the outlet (10a) opening (8a) (i.e. the heating media tube 15 is missing).

Please replace the paragraph beginning on line 8 of page 9 of the current specification with the following amended paragraph:

In all cases, the interstitial medium fluid (7) is isolated from the sample gas by a stopper construction at the tube end (6[[,17]]). In the preferred embodiment the filling material (9) seen

at the tube end (cross section view) fills only the space between capillaries and also bonds the capillaries together. In one preferred embodiment the filling material (9) is epoxy polymer.

Please replace the paragraph beginning on line 13 of page 9 of the current specification with the following amended paragraph:

In one preferred embodiment, the bundle (2) is a high-selective type hollow fiber capillary membrane bundle from industrial dryer sold under trademarks as Drypoint (Beko), MF-Dryer (CKD, Wilkinson), SF-Serie (Whatman, Balston), Sunsep (Zander, SMC), VarioDry (Ultrafilter) and Porous Media (Norgren). In this case, the structure of the capillary wall is shown in Fig. [[2c]] 2a and consists characteristically of an actual hollow fiber as a porous support (18) and an active dense layer (membrane) (19) covering the inner surface.

Please replace the paragraph beginning on line 29 of page 9 of the current specification with the following amended paragraph:

The zero time (retention time =0) is determined by switching the valve (4) from ~~position 4b to 4c as~~ the position shown in Fig. 1 (b) to the position shown in Fig. 1 (c).

Please replace the paragraph beginning on line 4 of page10 of the current specification with the following amended paragraph:

The detector sucks air through a filter and measure a clean background signal. The valve (4) was switched to the position [[4c]] shown in Figure 1 (c) and the sample was introduced at the same time. After [[3]] three seconds the valve 4[[c]] was switched to the position [[4b]] shown in Figure 1 (b). This procedure introduces a sample bolus into the fibers between clean air.

Please replace the paragraph beginning on line 11 of page 7 of the current specification with the following amended paragraph:

Within about [[40]] forty seconds, both chemicals have eluted through the column and detected selectively by ion mobility spectrometry (DIMP) and by metal oxide gas sensor (MeS). If in case the sample had been introduced through valve 6 as in Fig. 1 (a), there would be no time delay between the signals.